



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2021-0792; Project Identifier AD-2020-00593-G]

RIN 2120-AA64

Airworthiness Directives; DG Flugzeugbau GmbH Gliders

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to adopt a new airworthiness directive (AD) for all DG Flugzeugbau GmbH Models DG-500MB and DG-1000M gliders with a Solo Kleinmotoren GmbH Solo Model 2625 02i engine installed. This proposed AD was prompted by mandatory continuing airworthiness information (MCAI) issued by the aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as an error in the engine control unit (ECU) software. This proposed AD would require updating the ECU software. The FAA is proposing this AD to address the unsafe condition on these products.

DATES: The FAA must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <https://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: (202) 493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE, Washington, DC 20590.
- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact Solo Kleinmotoren GmbH, Postfach 600152, D71050 Sindelfingen, Germany; phone: +49 703 1301-0; fax: +49 703 1301-136; email: aircraft@solo-germany.com; website: <https://aircraft.solo.global/gb/>. You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 901 Locust, Kansas City, MO 64106. For information on the availability of this material at the FAA, call (816) 329-4148.

Examining the AD Docket

You may examine the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0792; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this NPRM, the MCAI, any comments received, and other information. The street address for Docket Operations is listed above.

FOR FURTHER INFORMATION CONTACT: Jim Rutherford, Aviation Safety Engineer, General Aviation & Rotorcraft Section, International Validation Branch, FAA, 901 Locust, Room 301, Kansas City, MO 64106; phone: (816) 329-4165; fax: (816) 329-4090; email: jim.rutherford@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under ADDRESSES. Include “Docket No. FAA-2021-0792; Project Identifier AD-2020-00593-G” at the beginning of your comments. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend this proposal because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to <https://www.regulations.gov>, including any

personal information you provide. The agency will also post a report summarizing each substantive verbal contact received about this NPRM.

Confidential Business Information

CBI is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as “PROPIN.” The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this NPRM. Submissions containing CBI should be sent to Jim Rutherford, Aviation Safety Engineer, General Aviation & Rotorcraft Section, International Validation Branch, FAA, 901 Locust, Room 301, Kansas City, MO 64106. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Background

The European Union Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Union, has issued EASA AD 2020-0056, dated March 13, 2020 (referred to after this as “the MCAI”), to address an unsafe condition on Solo Kleinmotoren GmbH Solo Model 2625 02 engines, variation 02i with electronic fuel injection, installed on but not limited to Binder Motorenbau, DG-Flugzeugbau and Schempp-Hirth powered sailplanes (gliders). The MCAI states:

An error was found in the ECU affected SW [software] that can cause brief injection of fuel into one cylinder when the ECU is activated.

This condition, if not corrected, could increase the time needed to (re)start the engine in flight, possibly resulting in reduced control of the powered sailplane.

To address this potential unsafe condition, SOLO Kleinmotoren GmbH, together with the ECU manufacturer [sic], developed an

ECU SW update and issued the SB [service bulletin] accordingly, providing installation instructions.

For the reason described above, this [EASA] AD requires an update of the ECU software.

You may examine the MCAI in the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0792.

The Model 2625 02i engine does not have an FAA type certificate. For Model DG-1000M gliders, this engine is part of the glider type certification. For Model DG-500MB gliders, this engine may be installed as a Model 2525 02 engine modified with a fuel injection system and re-identified as a Model 2625 02i engine.

FAA's Determination

This product has been approved by the aviation authority of another country and is approved for operation in the United States. Pursuant to the FAA's bilateral agreement with this State of Design Authority, it has notified the FAA of the unsafe condition described in the MCAI and service information referenced above. The FAA is issuing this NPRM after determining that the unsafe condition described previously is likely to exist or develop on other products of the same type design.

Related Service Information under 1 CFR Part 51

The FAA reviewed Solo Kleinmotoren GmbH Service Bulletin No. 4600-11, dated August 19, 2019. This service information specifies procedures for updating the ECU software to a version that fixes a software error found in previous ECU software versions. This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in ADDRESSES.

Proposed AD Requirements in this NPRM

This proposed AD would require updating the ECU software version and would prohibit installing software version V517 Revision 7 or earlier.

Costs of Compliance

The FAA estimates that this AD, if adopted as proposed, would affect 4 gliders of U.S. registry. The FAA estimates that it would take about 2 work-hours per glider to comply with the requirements of this AD. The average labor rate is \$85 per work-hour.

Based on these figures, the FAA estimates the cost of this AD on U.S. operators to be \$680 or \$170 per glider.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. Subtitle VII: Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701: General requirements. Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

The FAA determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Would not affect intrastate aviation in Alaska, and
- (3) Would not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new airworthiness directive:

DG Flugzeugbau GmbH: Docket No. FAA-2021-0792; Project Identifier AD-2020-00593-G.

(a) Comments Due Date

The FAA must receive comments on this airworthiness directive (AD) by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to DG Flugzeugbau GmbH Models DG-500MB and DG-1000M gliders, all serial numbers, certificated in any category, with a Solo Kleinmotoren GmbH Solo Model 2625 02i engine installed.

(d) Subject

Joint Aircraft System Component (JASC) Code 7300, Engine Fuel and Control.

(e) Unsafe Condition

This AD was prompted by mandatory continuing airworthiness information (MCAI) issued by the aviation authority of another country to identify and correct an unsafe condition on an aviation product. The MCAI describes the unsafe condition as an error in the engine control unit (ECU) software. The FAA is issuing this AD to prevent an injection of fuel into one cylinder when the ECU is activated. The unsafe condition, if not addressed, could result in difficulty starting the engine and reduced control of the glider.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions

(1) Within 3 months after the effective date of this AD, update the ECU software to software version V517 Revision 8 in accordance with the Actions in Solo Kleinmotoren GmbH Service Bulletin No. 4600-11, dated August 19, 2019.

(2) As of the effective date of this AD, do not install ECU software version V517 Revision 7 or earlier on any glider with a Solo Kleinmotoren GmbH Solo Model 2625 02i engine.

(h) Alternative Methods of Compliance (AMOCs)

(1) The Manager, International Validation Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (i)(1) of this AD, Related Information, or email: 9-AVS-AIR-730-AMOC@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(i) Related Information

(1) For more information about this AD, contact Jim Rutherford, Aviation Safety Engineer, General Aviation & Rotorcraft Section, International Validation Branch, FAA, 901 Locust, Room 301, Kansas City, MO 64106; phone: (816) 329-4165; fax: (816) 329-4090; email: jim.rutherford@faa.gov.

(2) Refer to European Union Aviation Safety Agency (EASA) AD 2020-0056, dated March 13, 2020, for more information. You may examine the EASA AD in the AD docket at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2021-0792.

(3) For service information identified in this AD, contact Solo Kleinmotoren GmbH, Postfach 600152, D71050 Sindelfingen, Germany; phone: +49 703 1301-0; fax: +49 703 1301-136; email: aircraft@solo-germany.com; website:

<https://aircraft.solo.global/gb/>. You may view this referenced service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 901 Locust, Kansas City, MO 64106. For information on the availability of this material at the FAA, call (816) 329-4148.

Issued on September 13, 2021.

Lance T. Gant, Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.

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